EA # UT- 062- 04- 014

Environmental Assessment

Utah's Colorado Riverway Recreation Area Management Plan Amendment 2: Pedestrian Bridge/Riverway Bikepath

Colorado River
Special Recreation Management Area

Department of the Interior
Bureau of Land Management
Moab Field Office

INTRODUCTION

NEED FOR THE PROPOSED ACTION

The Colorado Riverway Recreation Area Management Plan and its accompanying Environmental Assessment (EA #UT 062-92-010) were published in 1992. This plan set the basic guidelines regarding management of the Colorado Riverway. In 2001, several new proposals were analyzed as Amendment 1 to the Riverway Plan (EA #UT-062-99-151). The Decision Record on this EA was signed July 9, 2001. There are two proposed actions to be analyzed in the current document; the first (Pedestrian Bridge) was not considered in 2001; the second of these (Bike Lane) was analyzed, but not decisioned, in the 2001 EA. The two proposed actions are:

1) The Utah Department of Transportation (UDOT) and Grand County have identified bike and pedestrian traffic across the existing Colorado River bridge as a safety issue. To provide safe travel for non-motorized users, UDOT proposes to construct a non-motorized bridge across the Colorado River just upstream from the present U.S. 191 Highway Bridge. This bridge would connect to a bike path on both sides of the Colorado River. A portion of this bike path is already in existence at the Grand County-owned Lions Park.

2) UDOT and Grand County have identified bike traffic along Utah State Highway 128 as a safety concern. The Utah Department of Transportation and Grand County propose to construct a non-motorized bike lane along Utah State Highway 128 from Lions' Park to the Porcupine Rim Trail just upstream from Negro Bill Canyon. This bike lane would also provide a recreational amenity for the Moab community, as well as for its visitors. The length of this bike lane is approximately 3.2 miles. This action was analyzed in EA# UT-062-99-151 in 2001 (p. 56). The Decision Record approved the bike lane in concept, but stated that actual construction was contingent upon successful completion of Section 7 consultation with the U.S. Fish and Wildlife Service, completion of a Section 106 cultural resource clearance and additional visual resource management analysis. (In addition a 404 permit from the U.S. Army Corps of Engineers is necessary. This permit will be secured by the engineering firm.) The present document will address the above mentioned three resources for further analysis.

   Under this action, the lower terminus of the Porcupine Rim Trail would be rerouted for safety purposes to follow an old roadbed from the quarry area above Highway 128 to a point on Highway 128 opposite the present entrance to the Negro Bill Campground. The end of the bike lane would begin at the eastern entrance to the Negro Campground.

While the non-motorized bridge would be constructed first, the two projects are both part of a larger effort by Grand County, the Utah Department of Transportation, and the Bureau of Land Management to establish safe access to and from popular non-motorized trailheads near Moab. These particular projects are also supported by the Southeastern Area Office of the Utah Division of Forestry, Fire, and State Land that has jurisdiction over the bed of the Colorado River at the bridge location and along the route of the proposed bike lane.

Construction of a non-motorized bridge across the Colorado River is proposed to eliminate the present safety hazard of cyclists and pedestrians crossing the river via the existing U.S. Highway 191 Bridge.

The highway bridge has narrow traffic lanes and lacks adequate walkway space. Responsible drivers must follow slowly moving cyclists across the river. The walkways are too narrow for bicycle traffic and provide no protection for pedestrians. The option of widening the existing bridge to accommodate non-motorized traffic has been considered by the Utah Department of Transportation and rejected as being beyond the design strength of the bridge.

The non-motorized Bridge would be located just upstream from the existing Highway 191 Bridge. It would be sited adjacent to the alignment of the 1912 bridge that was removed when the current highway bridge was installed in the early 1950's. The bridge approaches would be built on land owned by Grand County with the south shore approach in Lions Park and the north shore approach leading onto the road to the county boat ramp. All or a portion of the bridge abutments would be located on county land or Utah State Sovereign lands. The non-motorized bridge would rest on two or possibly three piers on State Sovereign lands in the bed of the river.

The construction of the non-motorized bridge would also connect the two sections of the County owned Lions Park. The northern portion of this park is currently isolated from its southern part; construction of a non-motorized bridge would make this County-owned recreation facility usable by visitors and residents alike. In addition, a non-motorized bridge would become a destination in itself, as people would use the bridge to stroll out on and to take photographs up and down the river. In other words, the bridge would become a focal point of recreation activity; it would not be merely a transportation mechanism.

Construction of a bike path along the western portion of State Route 128 is proposed to eliminate the present safety hazard to cyclists using this narrow section of a relatively busy highway. State Route 128 is squeezed between the Colorado River and adjacent cliffs and lacks paved shoulders. Short sections of route lack any shoulder whatsoever. Since the late 1980's, the western 3.2 miles of State Route 128 has accommodated mountain bikers completing the Porcupine Rim Trail who finish their rides at either the Negro Bill Canyon parking areas near mile 3.1, at Lions Park at mile 0.0, or by returning to Moab.

The Utah Highway 128 Bike Path Feasibility Study completed in 2001 determined that approximately 24,000 to 26,000 cyclists ride the Porcupine Rim Trail and some portion of Highway 128 annually and that bicycle traffic accounts for about 20 percent of total highway use during the peak use months of April and May. Trucks and busses, many towing boat trailers, account for about 25% of vehicle traffic and pose a special hazard to cyclists.

The proposed bicycle path would mostly follow the shoulder of the river side of State Route 128 for 3.2 miles from the entrance of the Negro Bill Camping Area to lands owned by Grand County in Lions Park near the U.S. 191 Bridge. The bike path would be located on Federal lands managed by the Bureau of Land Management, Sovereign Lands of the State of Utah administered by the Utah Division of Fire, Forestry, and State Lands, and land owned by Grand County at Lions Park. With the exceptions of the portion of the route below the Goose Island Overlook and part of the Lions Park area, the entire proposed bike path, is within the State Route 128 right-of-way.

CONFORMANCE WITH LAND USE PLAN

The proposed action has been determined to be in conformance with the terms and conditions of the Grand Resource Area Management Plan (July 1985) as required by 43 CFR 1610.5. The relevant

objective of the Grand RMP is: "to accommodate the expanding recreation use while reducing the impacts on the recreation resource base." (p. 16).

RELATIONSHIP TO STATUTES, REGULATIONS, OR OTHER PLANS

The proposed action is consistent with the 2004 Grand County General Plan. The following excerpts from that plan relating to the proposed action are reproduced below:

"At the current time, Grand County's economy is driven by seasonal tourism. It's important that we continue to invest in and develop that part our economy." (p. 45)

"Grand County will continue to participate in developing a plan that accommodates non-motorized users including hikers, backpackers, mountain bikers, horseback riders, and road cyclists. Official trails will be identified by public land managers, county officials, businesses, and users in the above recreation groups. Trails will include both historically established and planned new trails." (p. 50)

"Grand County promotes cooperation with federal and state agencies to identify and implement appropriate management of high-use and special value areas, for example, Sand Flats, Mill Creek, Potato Salad Hill, the Highway 128 Corridor, the Kane Creek Corridor, and Moab Rim Trail." (p. 50)

"Multi-use trails are an important element in a multi-modal transportation system. A multi-use trail system, including segregated bikeways along major transportation corridors is needed to ensure safe and convenient access for all users from the city of Moab to public lands." (p. 57)

"Grand County should develop multi-use trails plan for Spanish Valley to interconnect the City of Moab, County neighborhoods, parks, the Mill Creek Parkway and other existing trails to public lands via stream corridors, and historic and planned public accessways." (p. 58)

"Grand County should work with UDOT, as appropriate, to develop segregated bike ways along all collector streets, and State Highways." (p. 58)

SCOPING AND ISSUE IDENTIFICATION

The BLM utilized a systematic and interdisciplinary approach to ensure that all resources were analyzed. Scoping included notification of the public. The proposed action was posted on the BLM's Environmental Notification Bulletin Board on November 24, 2003.

Section Seven Formal consultation was initiated with the U.S. Fish and Wildlife Service on September 17, 2003. A Biological Opinion (FWS/R6/ES/UT 6 UT-04-F-002 04 0584) was issued by the U.S. Fish and Wildlife Service on March 29, 2004.

An internal scoping meeting with BLM staff members was held on November 24, 2003. If a critical element was identified that "may be impacted", the issue was carried forward for detailed analysis. The following is a list of Critical Elements of the Human Environment that were carefully considered but not carried forward for detailed analysis since they would not be impacted by the proposed action or any of the alternatives: Threatened or Endangered Plants, Air Quality, Noxious Weeds, Farmlands,

Paleontology, Areas of Critical Environmental Concern (ACEC's), Hazardous Waste, Wilderness, Wild and Scenic Rivers, and Environmental Justice.

Additionally, a thirty day comment period on this Environmental Assessment will be held from May 7, 2004 to June 20, 2004.

Issues Carried Forward for Analysis

The following issues were identified for detailed consideration in each of the proposed actions.

1) Non motorized bridge: T&E Animals, Recreation
2) Bike path: all issues were analyzed in EA#UT-062-99-151 except VRM, Cultural and T&E Animals, which are analyzed in this EA

PROPOSED ACTION AND ALTERNATIVES

Proposed Action

1) Non-motorized Bridge across Colorado River

A non-motorized bridge across the Colorado River would be located just upstream from the U.S. Highway 191 bridge, and just downstream from the Moab boat ramp. Construction of the non-motorized bridge would involve building approach/abutment structures on both sides of the river, installing two or three piers in the river channel, and installing a pre-fabricated bridge that would likely be built in three major sections. Construction would also include building asphalt handicap accessible approach ramps in Lions Park to connect the bridge with the existing bike lane and walkway within the park and adding an asphalt surface to at least a portion of the graveled road and parking area on the north side of the river. The non-motorized bridge itself would be 10 feet wide and approximately 588 feet in length. Construction activity would be confined to the Lions Park and the north shore boat ramp areas which have both been heavily modified by past construction activity, including past bridge construction.

2) Bike Lane along Utah Highway 128

The proposed 3.2 mile long bike path would be built as a 10 foot wide shared use path that would closely follow the alignment of State Route 128 except in the Goose Island Area where it would leave the highway just upstream from the Goose Island Campground, run between the highway and the campground road, exit the campground and run along the base of the low escarpment between the river and the highway below the Goose Island Overlook Interpretive Site, and then rejoin the highway alignment. The shared use path would be separated from the highway both vertically and horizontally without guardrail for approximately 52% of project length. In narrow sections where special construction methods would be required, the bike path would be slightly separated from the highway both vertically and horizontally for approximately 36% of project length. In these narrow sections, special construction methods would involve highway guardrail and concrete curbing and riverside handrails and be supported by gabion and key block retaining wall or similar structures. For approximately 12% of project length, the bike path would be separated from the highway by more than 5 horizontal feet and require no vertical separation, guardrail, or other special construction.

The shared use bike path would be built in stages. The entire project would require approximately 5,300 feet of gabion retaining wall (or similar structure), 6,300 feet of guardrail, 5,700 feet of handrail, 5,800 feet of concrete curbing, 300 feet of key block retaining wall (or similar structure), and construction of 80 foot long and 65 long bridges across drainages existing at the mouths of Negro Bill Canyon and Ice Box Canyon.

Grand County is working to plan the bike path. The Utah Department of Transportation has funded initial work on the project using highway enhancement funds. The county hired a consultant to conduct a feasibility study of the path. The consultant completed his report in March of 2001. A separate engineering study and design process is now complete. This effort is expected to build upon and refine the shared use path concept developed in the feasibility study.

No Action Alternative

1) No Action: the non motorized bridge across the Colorado River will not be built
2) No Action: the bike lane along Utah Highway 128 will not be built

Alternative Considered, but Rejected

An alternative to building the non-motorized bridge is to place a bike lane on the side of the U.S. Highway 191 bridge when it is replaced in future years. This alternative was rejected because it would not meet the purpose and need of uniting the two pieces of Lions Park, nor would it provide a recreation amenity in and of itself. The added bike lane, while safer than the present highway bridge for bicyclists, would not be as safe as a separate non-motorized bridge; it would not provide views or a destination for pedestrians. Furthermore, the replacement of the Highway 191 bridge is in the unspecified future.

AFFECTED ENVIRONMENT

Proposed Action

General Setting

Non motorized bridge: The proposed non-motorized bridge is located just north of the town of Moab, Utah. It would connect the county-owned Lions Park on the south side of the Colorado River to an area near the Moab Boat Ramp on the north side of the river.

The Lions Park area is frequently used for highway rest purposes, picnics, Lions Club activities, special events, and general river access. An existing bike lane follows a dike along the river channel for the length of the park and allows cyclists, runners, and pedestrians to safely bypass the U.S. 191/ SR 128 intersection on a route that passes underneath the U.S. 191 bridge. Other visitor use developments at Lions Park include a small building with kitchen facilities, a covered picnic area, additional picnic tables, a drinking water distribution system, interpretive exhibits, vault toilets, parking barriers, a large lower-level concrete parking and dancing area, a large upper level graveled parking area, and an asphalt road that connects the two parking areas. The entire area within Lions Park that is situated above the river appears to have been disturbed by past project work. Tamarisk along the section of the south-shore

riverbank in Lions Park, where the non-motorized bridge would be constructed, was recently removed in a tamarisk control project. Herbicide was applied to retard the regrowth of tamarisk. The few small cottonwoods in this riverback section were saved. No mature cottonwoods would be removed as a result of the project.

The north shore boat ramp area has been heavily disturbed in the past for construction of explosives shelters, construction of the existing boat ramp and establishment of a parking area. In addition to the concrete boat ramp on the north shore, there exists the large concrete abutment from the 1912 highway bridge, a set of steps and landing area west of the project area, and two historic explosives storage shelters with metal doors at the base of the cliff. Except for the boat ramp and bridge abutment that are bare of vegetation, the north shore riverbank area consists of a dense stand of tamarisk. The tamarisk just upriver from the project area was the scene of a large fire two years ago and has been cleared mechanically.

Grand County is also working with design staff at Utah State University on plans to generally upgrade the existing facilities at Lions Park and around the existing boat ramp on the north shore. These upgrades are expected to include replacement of the existing restrooms, picnic shelters, cookhouse, information exhibits, and drinking water systems and installation of a new landscape watering system and shade trees. Construction of the bridge would link the two park areas for integrated use.

Highway 128 Bike Lane: State Route 128 is a Utah Scenic Byway and a segment of the Prehistoric Highway National Scenic Byway. It is also the major use area of the Bureau of Land Management's Colorado Riverway Special Recreation Management Area. In 2001, the State Route 128 section of the Riverway hosted approximately 427,050 visitors. Recreation facilities along the project area include the ending point of the Porcupine Rim mountain bike and hiking trail, the Negro Bill Canyon Camping Area, the Negro Bill Canyon Hiking Trailhead, the Goose Island Campground, the Goose Island Overlook Interpretive Site, the Matrimony Spring drinking water source, and the Lions Park site. Tamarisk is the dominant form of vegetation along the route. There are also scattered cottonwood trees near the river sections with mixed tamarisk and native willows. Greasewood and rabbitbrush predominate along sections of the highway where it leaves the river. In 2001, a wildfire started on the north side of the river near the county boat ramp and burned up river for approximately 0.75 miles. It also jumped the river and burned most vegetation between the river and the highway from about mile 0.3 to the lower end of the Goose Island Campground. The fire killed most of the mature cottonwoods. After the fire, most of the area along the proposed bike path up to the Goose Island Campground was treated by mulching the tamarisk hulks to ground level and applying herbicide to encourage native willow regeneration and discourage tamarisk growth. Follow-up herbicide application to treat tamarisk is on-going.

The southern side of the river along the project area is bordered by Navajo and Kayenta sandstone cliffs and ledges broken several times by the mouths of canyons that drain into the river. The northern shore, along the Arches National Park side of the river, has similar cliffs and ledges and one section where the cliffs are set back from the river.

The portion of the project area where the bike path would leave the highway in the vicinity of Goose Island is subject to flooding at river flows above about 40,000 CFS. In the past 20 years, spring high

water flows of the Colorado River have flooded the area 3 times. Flows through the area have been slow moving.

Resources Brought Forward for Analysis

Recreation

Lands along the Colorado River corridor are a hub of recreational activities, and, as such, are essential to the Moab economy. Non-motorized users are drawn to the Colorado River corridor; the present conditions of both the road and the existing motorized bridge make for an unsafe situation. Bicyclists attempting to cross the Colorado are forced to share a single lane with trucks, motorhomes and cars. Although there is no walkway, pedestrians seeking to photograph the river often walk onto the highway bridge. It is these recreation uses that have prompted Grand County and the Utah Department of Transportation to propose a non-motorized bridge across the Colorado River.

Bicycle use of Utah Highway 128 is substantial; the 3.2 miles proposed for addition of the bike path are heavily used by mountain bikers completing the last portion of the Porcupine Rim bike trail. In addition, bicyclists are drawn to Utah Highway 128 because of the scenery along the road. The narrow, winding nature of that road, in combination with the volume of motorized traffic, makes for an unsafe situation. There is a need to separate the motorized and non motorized users in this small, confined area. Non-motorized recreational use of Utah Highway 128 is why Grand County and the Utah Department of Transportation propose a separate bike path along this portion of the highway.

Visual Resources

The scenic values within the project area are of national significance. Scenery along Utah Highway 128 is comparable to that within Arches and Canyonlands National Park. The north side of the river (opposite the road) is within Arches National Park. Utah Highway 128 is both a National Scenic Byway, and has also been designated by the state of Utah as a Scenic Byway. Each year, approximately 427,000 tourists travel Highway 128 to appreciate its scenic values. The BLM also maintains two developed campgrounds along this segment of Highway 128.

In addition to those who view the outstanding scenery from the highway by bike or car, many people also enjoy the scenery from a boat on the Colorado River. Although most of the commercial float trips take out upriver from the proposed action, there is one scenic tour that is offered on this stretch of the river. Grand County maintains a developed boat ramp just upstream from the proposed bridge. This segment of the river is also a relatively popular venue for canoeing. There are no designated viewing points of the river corridor from Arches National Park.

Visual Setting

Utah Highway 128 and the Colorado River wind through a narrow canyon with steep cliffs. The canyon is bordered by Arches National Park on the north and the Colorado Riverway Recreation Area on the south. Two BLM campgrounds and one boat ramp exist by the river along the project boundary. Highway 128 sees increased traffic as tourists come to enjoy the outstanding scenery, and to drive back and forth from their campgrounds into Moab. The formations from Negro Bill Canyon to U.S. Highway 191 are dominated by the steep sheer cliffs on the south side of the river, with their prominent displays

of desert varnish, and the outstanding petrified dunes and spires of Arches National Park on the north side.

The landform of this segment is a diverse display of outstanding geology. The tight canyons and rock formations make this area visually remarkable based on the geology and landform alone. The vegetation is a variety of riparian trees, shrubs and grasses which is dominated by tamarisk. The water is a dominant feature. The color of this segment is rich in its combinations, with pleasing contrasts between the varied colors of red and brown in the landform, and the green and gold of the vegetation. The adjacent scenery plays a major role in the views, and the scarcity of this segment is that it is one of a kind, and unusually memorable. This combination of elements makes the proposed project area an outstanding visual resource.

The Colorado River corridor is an outstanding viewer platform. The proposed bike path (along with the existing highway) would serve as structures in the immediate foreground of this important travel way. Recreation areas often require special considerations in meeting visual resource management objectives. To be functional, facilities in the immediate foreground must be visible and ordinarily create more contrast than will be acceptable in areas designated as VRM II. However, the facilities are actually part of the expected image of the public being served. When people travel along Highway 128, they realize they are in a somewhat modified setting, yet they obtain impressions that they are viewing a natural-appearing landscape outside the immediate foreground. The somewhat modified and visible immediate foreground setting of the highway and bike path is accepted as a necessary component which allows them to experience the greater landscape. Thus, expected images of naturalness exist for the foreground, middleground, and background that do not exist for the immediate foreground.

Current RMP Visual Objectives

The current Moab Office Visual Resource Inventory identifies the Highway 128 river corridor as Class A scenery (the highest rating). It also identifies the corridor as high sensitivity and all views are within the foreground. This area is being considered for special management status in the ongoing management plan revision. The entire project area has been determined to be within visual resource management class II. The objective of class II is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

Cultural Resources

A cultural resources survey was conducted on May 15, 2003. No cultural resources were found during this survey.

Endangered Animal Species: Colorado River and Riparian Habitat

Endangered Fish

The Colorado River at the proposed bridge site (approximately river mile 64), as well as the river along the proposed bikepath, is located within Critical Habitat (so designated by the U. S. Fish and Wildlife Service (USFWS)) for the Colorado pikeminnow, bonytail chub, humpback chub, and the razorback sucker.

Colorado pikeminnow

The Colorado pikeminnow (*Ptychocheilus lucius*) was first listed as endangered on March 11, 1967 (32 FR 4001) and full protection was afforded under the Endangered Species Act (ESA) of 1973. *A Recovery Plan for the Colorado Pikeminnow* (formerly the Colorado squawfish) was prepared by the USFWS in 1978 and was revised in 1990 and 2002 and is now the *"Colorado Pikeminnow Recovery Goal: Amendment and Supplement to the Colorado Squawfish Recovery Plan"* (Byes 2003).

The Colorado pikeminnow is the largest minnow in North America and one of the largest in the world and is found only in the upper Colorado River Basin. Natural populations are restricted to the upper Colorado River Basin in Wyoming, Colorado, Utah, and New Mexico. The main stem of the Colorado River from Palisade, Colorado to Lake Powell has a known population within this region and the proposed bridge site lies within this region. (Byes 2003).

When mature at 6 years and at least 16 inches, Colorado pikeminnow will migrate more than 200 miles between late June to mid August to spawn (r6.fws.gov). Larvae hatch and drift downstream for about six days to backwater nurseries in alluvial river reaches. Nursery habitat consists of productive backwaters in ephemeral, along-shore embayments that develop as spring flows decline (Holonich 1998). The Colorado pikeminnow is a warm water obligate, requiring temperatures above 16°C for spawning, egg incubation, and survival of young, the most critical phase in their life history. Spawning sites are characteristically white water canyons with coarse cobble/boulder substrate formed from rapids or riffles of deep pools and eddies that have been scoured by high flows. Spawning has been confirmed by the presence of larval fish in two reaches of the Colorado River; Black Rocks to Loma and Grand Junction to Clifton. Larval pikeminnows have also been collected near the Redlands Diversion Dam near Grand Junction and larval aggregations and suitable spawning habitat have been identified near Cataract Canyon, Professor Valley, and up stream from the Dolores River on the Colorado River. This would indicate that spawning is occurring in or near these areas also (Archer et al. 1985, Valdez 1990). The most important rearing area in the Colorado River for young-of-the-year Colorado pikeminnow is between Moab and the confluence with the Green River. In a recapture study 33% of the recaptured fish were caught in the Moab Valley between river miles 57.3 and 64.9. The Colorado River Fishes Recovery Program implemented an interagency Standardized Monitoring Program and from 1986 to 1997 between 1-28 pikeminnows were consistently collected between river miles 68-49. In young-of-the-year sampling between river miles 48-84 anywhere from 0 to 53 pikeminnows were collected at any one site (Holonich 1998).

Colorado pikeminnow are endemic fish that have evolved in rivers with seasonally variable flows, high silt loads, turbulence, and high turbidity. Turbidity is assumed to be an important factor to these native fish that have evolved under high silt loads. Today turbidity may also play an important role in giving native fish a competitive edge, as non-native fishes prefer clear, cool waters (Holonich 1998). Flow regulations, migration barriers, habitat loss/alteration, and introduced non-native fish have all been identified as causes for population decline (UDWR) along with increases in salinity and contaminants (Holonich 1998).

Bonytail Chub

The Bonytail Chub *(Gila elegans)* was listed as endangered on the List of Endangered Species on April 23, 1980 under the ESA of 1973. The Bonytail Chub Recovery Plan was approved in 1984 and revised in 2002 as *Bonytail Chub Recovery Goals: Amendments and Supplements to the Bonytail Sucker Recovery Plan (ATE 2003).*

The Bonytail chub (*Gila elegans*), now the rarest of the endangered fishes of the Colorado, evolved about 10,000 years ago; it can live for almost 50 years. Due to the lack of availability of this fish in the wild, less is known about these fish. In the late 50' and early 60's reproduction was documented on the Green River in Dinosaur National Monument. Ripe spawning bonytail were captured from mid-June to early July at water temperatures of 18°C over gravel bars up to 30 feet in dept. Currently there are no self-sustaining populations in the wild and until recently bonytail chub were considered extirpated from the upper Colorado River Basin (AET 2003). Recovery efforts to restore bonytail to its former habitat have resulted in stocking 2,000 bonytail chub near river mile 86, above Onion Creek (USFWS 1998). According to Mike Hudson, UDWR, bonytail have been stocked for the past 6 years along the Colorado River at Cisco and Dewey and plans are to continue for the next 6 years. It is possible for stocked bonytail to drift down stream to this area and there is documentation of the bonytail captures in the area (personal communication, Dec, 2003).

Flow regulations, habitat loss/alteration and introduced non-native fish have all been identified as causes for population decline (UDWR)

Humpback chub

The Humpback chub (*Gila cypha*) was listed as endangered on the List of Endangered Species on March 11, 1967 and was included in the U.S. List of Endangered Native Fish and Wildlife on June 4, 1973; full protection was afforded under the ESA of 1973. The *Humpback Chub Recovery Plan* was approved in 1979 and revised in 1984 and again in 2002 as the *Humpback Chub Recovery Goals: Amendments and Supplements to the Humpback Chub Recovery Plan* (Byes 2003).

Humpback chub can spawn as young as 3 years and at 5 inches long, usually between March and July, moving into warmer waters and at times up stream, though they do not make migrational movements and tend to reside throughout the year within a limited reach of the river. The juvenile chubs prefer backwaters with no current, a firm silt bottom, and depths of two feet. Adult chubs prefer eddies and runs with sand bottoms and a variety of velocities, depths, and temperatures (Holden 1977). Canyons with deep, swift water and rocky substrates on the Green and Colorado Rivers have been identified as important habitat. Populations have been identified in the Upper Colorado River Basin with the highest concentrations found in the Black Rocks and Westwater Canyon reaches of the Colorado River near the Colorado/Utah state line (Byes 2003). The presence of juvenile populations suggest spawning may occur in the Upper Colorado River at Black Rocks, Westwater Canyon, Cataract Canyon, and Desolation/Gray Canyon (Byes 2003). The Colorado River Fishes Recovery Program implemented an interagency Standardized Monitoring Program from 1986 to 1997 and no humpback chubs were collected in the Colorado River near Moab (Holonich 1998). Flow alterations have been identified as a significant cause of decline (UDWR) along with competitive factors from non-native fish, increases in salinity and contaminates (Holonich 1999).

Razorback sucker

The Razorback sucker (*Xyrauchen texanus*) was listed as endangered on the List of Endangered Species on March 21, 1994 under the ESA of 1973. The *Razorback Sucker Recovery Plan* was approved in 1998 and revised in 2002 as the *Razorback Sucker Recovery Goals: Amendments and Supplements to the Razorback Sucker Recovery Plan* (Byes2003).

The razorback sucker is one of the largest suckers in North America, spawning as early as 3-4 years and 14 inches long. Depending on water temperatures, spawning typically takes place from mid-April to mid-June and the razorback sucker is known to migrate long distances to congregate in large numbers in spawning areas (r6.fws.gov). The sucker prefers a variety of habitats, including the warm waters of backwaters, sloughs, and oxbow lakes. (Brookshire 1993). The Green River has the only known spawning areas (UDWR). Populations have been identified in the Colorado River from Rifle, Colorado to Lee's Ferry, Arizona and also in areas of the Green, Gunnison, and Yampa Rivers (Byes 2003). The Colorado River Fishes Recovery Program implemented an interagency Standardized Monitoring Program from 1986 to 1997 and no razorback suckers have been collected in the Colorado River near Moab (Holonich 1998). Flow regulations, habitat loss/alteration and introduced non-native fish have all been identified as causes for population decline (UDWR) along with increases in salinity and contaminants (Holonich 1998).

Endangered Fish Critical Habitat

Critical Habitat, as defined by the USFWS, includes those portions of the 100-year floodplain that contain constituent elements essential for the conservation of the species. These constituent elements can be summarized as: (1) space needed for growth and normal behavior; (2) food, water, air, light, and nutritional or physiological requirements; (3) cover and shelter; (4) Sites for breeding and rearing young; (5) habitat protected from disturbance or representative of distribution. The primary constituent elements determined necessary for the survival and recovery of the four endangered Colorado River fishes include, but are not limited to:

Water: A quantity of water of sufficient quality that is delivered to a specific location in accordance with a hydrological regime that is required for the particular life stage for each species.

Physical Habitat: Areas of the Colorado River systems that is inhabited or potentially habitable by fish for use in spawning, nursing, feeding, and rearing, or corridors between these areas. In addition to river channels these areas also include bottom lands, side channels, secondary channels, oxbows, backwaters, and other areas in the 100-year floodplain, which when inundated provide spawning, nursery, feeding, and rearing habitats, or access to these habitats.

Biological Environment: Food supply, predation, and competition are the most important elements of the biological environment and are considered normal components of this constituent element. Food supply is a function of nutrient supply, productivity, and availability to each life stage of the species. Predation and competition, although considered normal components of this environment, are out of balance due to introduced non-native fish species in many areas. (Holonich 1998)

Endangered Birds

Mexican Spotted Owl

Prior to becoming Federally listed, the **Mexican spotted owl** (*Strix occidentalis lucida*) was listed in 1987 as sensitive by the Utah Division of Wildlife Resources (UDWR) and elevated to threatened in 1992. It became Federally listed as a threatened species in 1993 under the ESA of 1973. Immediately following its listing, a team was appointed to develop the Mexican Spotted Owl Recovery Plan. This plan was completed in 1995 by the USFWS and partitioned the Mexican spotted owl habitat into six distinct recovery units within the United States. The Moab Field Office is within the Colorado Plateau recovery unit. The Recovery Plan provides a basis for management action to be undertaken by land management agencies to remove recognized threats and recover the Mexican spotted owl (MSO). A proposed rule designating Critical Habitat for the MSO was published in July 2000. This rule became effective March 5, 2001. USFWS and the Recovery Plan recognizes two models, the 1997 Willey-Spotskey's MSO Habitat Model and the 2000 Willey-Spotskey's MSO Habitat Model, to be used as tools to identify and protect MSO habitat. The 1997 model is recognized as an overestimate of all habitat in almost all cases, whereas the 2000 model may underestimate owl habitat, particularly foraging, winter and dispersal habitat. USFWS recommends a multi-tool approach, using the 1997 model for large scale planning efforts and the 2000 model to identify possible areas that may provide nesting and roosting habitat where activity centers may be located. Buffers (.5 mile) may be used in areas where the 2000 model depicts potential habitat and planned projects may cause impacts. Canyons less the 2 km wide and more then 2 km long (2X2 rule) also need to be assessed for potential MSO habitat. Field reviews should be implemented by experienced MSO field personal to determine the quality of habitat identified by both models. Owl surveys, according to protocol, should be conducted in areas where surveys predict quality breeding/roosting habitat.

The **Mexican spotted owl** (MSO) is one of three spotted owl subspecies recognized by the American Ornithologist's Union. It is distinguished from the Californian (*S.o. occidentalis*) and the northern (*S.o. caurina*) subspecies by its geographic distribution and plumage. The MSO ranges from the southern Rocky Mountains in Colorado and the Colorado Plateau in southern Utah, southward through Arizona and New Mexico and discontinuously through the Sierra Madre Occidental and Oriental to the mountains at the southern end of the Mexican Plateau. MSO habitat includes high canopy closure, high stand density, and multi-layered canopies of uneven-age stands. Steep slopes and canyons with rocky cliffs characterize much of the MSO habitat. Within the Utah portion of the Colorado Plateau Recovery Unit, owls are known to nest in steep-walled canyon complexes and rocky canyon habitat within desert scrub vegetation. Breeding season typical begins as early as March and the fully developed owlets are independent by early October. Nesting typically occurs in April, but eggs have been observed as early as March. The eggs are usually hatched by the end of May and owlets fledge in June, 34-36 days after hatching. When the owlets first fledge the nest they are unable to fly and remain in the nesting area. By early October the fully developed owls become independent of the parents. (Byes 2003). The owl exists in small isolated subpopulations and is threatened by habitat loss and disturbance from recreation, overgrazing, road development, catastrophic fire, timber harvest, and mineral development (UDWR).

Southwest Willow Flycatcher

The river and associated tributaries may also provide riparian corridors for the Southwest willow flycatcher. These corridors may have the potential to serve as nesting habitat for the Southwest willow flycatcher (SWWF). Thick stands of tamarisk dominate most of the area, interspersed with Fremont cottonwood, narrow leaf cottonwood, water birch, willow species, sedges, rushes, and a variety of perennial grasses and forbs.

The Southwest willow flycatcher (*Empidonax traillii extimus*) was listed as endangered on March 29th 1995, under the ESA of 1973, and critical habitat was formally designated on July 22nd, 1997, however none has been designated in Utah. The *Final Recovery Plan Southwest Willow Flycatcher* was completed by USFWS in August of 2002 (Byes 2003).

The Southwest willow flycatcher (SWWF) is one of four recognized sub-species of the willow flycatcher (*E. traillii*) and is genetically distinct from the other three sub-species. Morphological characteristics and song also differs from other sub-species, though these differences are difficult to distinguish and there are no reliable characteristics for field identification.

The SWWF breeds in patchy to dense riparian habitats along streams and wetlands near or adjacent to surface water or saturated soils. These dense patches are often interspersed with small openings, open water, and/or shorter/sparser vegetation, creating a mosaic habitat pattern. Historically, nests were constructed in native willow species but currently the SWWF will utilize both native and exotic species, such as tamarisk and Russian olive, which provide desired habitat requirements. SWWF typically arrive to their breeding grounds between early May to early June, with the male arriving a week or two before the female to establish territories. Once females arrive, pairs are formed and nests are usually built within a week. Egg laying can begin as early as May but typically begins mid-June. Three to four eggs are laid and incubation lasts approximately 12 to 13 days. Nestlings fledge 12 to 15 days after hatching but remain in the general nest area for a minimum of 14 to 15 days. Second clutches are not uncommon if the first nesting attempt fails. Dispersal after nesting is poorly understood, but successful pairs may remain at their breeding sites through mid-August to early September. Unsuccessful pairs may abandon their territories midway through the breeding season (USFWS). Population declines are attributed to numerous, complex and interrelated factors such as habitat loss and modification, invasion of exotic plants into breeding habitat, brood parasitism by cowbirds, vulnerability of small population numbers, and winter and migration stress (SWWF Recovery Plan 2002).

The reach of the river that lies between or within the proposed bike path has been modified by past construction activity and is subject to continual disturbance due to high recreational use and traffic along State Highway 128. From mile 0.3 to the lower end of the Goose Island Campground the 2001 fire killed most of the mature cottonwoods. Most of the area along the proposed bike path up to the Goose Island Campground was treated by mulching the tamarisk hulks to ground level and applying herbicide to encourage native willow regeneration and discourage tamarisk growth, further adding to the disturbance level. This area has also been assessed by Matt Johnson, Wildlife Biologist with Southwest Biological Science Center, Colorado Plateau Field Station at the Northern Arizona University and it was determined in 2002 that the habitat along his reach of the Colorado River offered low potential SWWF breeding sites.

Alternatives

The description of the affected environment for the No Action alternative would be the same as the description for the proposed action.

ENVIRONMENTAL CONSEQUENCES

Proposed Action

Direct and Indirect Impacts

Recreation

Non-motorized Bridge Construction

The construction of a non-motorized bridge across the Colorado River would have beneficial impacts to recreation users. Bicyclists would be able to cross the river safely, and pedestrians would be able to walk across a bridge that they did not have to share with heavy motorized traffic. The two disparate pieces of the county-owned Lions Park would be joined in an attractive fashion. The walkway of the bridge would be a prime spot for people to photograph the scenery of the river corridor. Walkers, joggers and runners would also have access to the river corridor; their access would be unimpeded by the heavy vehicular traffic which crosses the U.S. Highway 191 bridge.

Highway 128 Bikepath Construction

The construction of a bikepath along 3.2 miles of Utah Highway 128 would have beneficial impacts to recreation users. Bicyclists would be able to bicycle along the highway without sharing the road with motorized traffic. (The impacts to recreation of constructing the bike lane were considered more fully in Amendment 1 to the Colorado Riverway Plan EA#UT-062-99-151.) Under the current proposal, the bike path will be added to the recreation amenity of the pedestrian bridge; this duality enhances the recreation value of the Highway 128 bikepath. It is expected that there will be increased non-motorized use of the Highway 128 corridor; the construction of the bikepath would increase user safety as the bikepath would be designed with safety in mind.

Visual Resources

Three key observation points were chosen for analysis for the project: Key Observation Point 1 --the linear corridor of Highway 128 as traveled by vehicle (or as a pedestrian) through the project area going both up and down the river; Key Observation Point 2 -- floating both up and down the river; and Key Observation Point 3 --the view of the pedestrian bridge from the Lions Park area. The views seen by travelers on the river have been considered because businesses in Moab rely on this stretch of the river for commercial tours and for a canoe rental venue.

Key Observation Point 1 Analysis

The views of the Colorado River along the highway both up and down the river as seen by vehicular traffic will for the most part improve as a result of the proposed action. The existing evasive tamarisk growing along the river has screened the river from view for much of the proposed project area. The appeal of the river as a visual attraction will enhance the visual quality of the drive. The proposed additions of guard rails and handrails may create a visual contrast and should thus be constructed in a manner to blend with the color and texture of the area. This would be accomplished by using an untreated finish and by allowing them to oxidize to a natural red/brown color. The guard rails and handrails should be sprayed to accelerate the aging process. The proposed concrete curbs should be colored to match the dominant red/brown colors of the canyon.

The cliff side of the road should be treated with great care and cuts should be avoided if possible. If cuts are necessary, techniques such as split face blasting and shaping cuts and fills to match the fractured appearance of the canyon should be implemented. In order to mitigate the removal of vegetation along the river, native species should be pole planted within the rip rap to provide a more natural appearance to the river corridor from the roadway. In the segments where the bike path leaves the shoulder of the road, careful attention should be given to the visual effects upon the two existing campgrounds, especially the Negro Bill primitive campground where several of the existing campsites will be adjacent to the proposed rip rap and retaining walls.

Key Observation Point 2 Analysis

The views from the Colorado River will be affected in the short term by the removal of the vegetation because the highway and the structural elements associated with the bike path may now be exposed. The removal of vegetation on one side of the river will give the appearance of a natural bank on the Arches side and a developed bank on the highway side. There will be changes in the form, line, color and texture of the river bank along an estimated one-half of the project area where the bike path runs adjacent to the river. (See project map attached). The path moves away from the river east of the Goose Island Campground and connects back to the river just past the Goose Island information kiosk. These sections of the project will not affect the views from the river. In all segments where the bike path and road will be visible from the river, retaining systems should be constructed in a material that matches the natural form, line, color and texture in order to reduce the amount of contrast. Native vegetation should be placed to restore the natural appearance and help screen the structural elements from the views along the river. Over time, the vegetation should mitigate this impact but for the first five years of the project there may be an impact that could exceed VRM class II standard.

Key Observation Point 3 Analysis

The pedestrian bridge will be visible from both the river and the road. Because of the nature of the bridge, this structure is actually part of the expected image of the public being served. For this reason, and because the bridge serves as a recreational viewing platform, a degree of contrast beyond VRM class II is appropriate. However, limits of contrasts are allowed only to the extent that the functions of the bridge are served. The bridge should be a positive element of the built environment that does not detract from the scenic experience. The bridge should blend into the landscape while still retaining its function. The bridge should be an indicator of sensitive land stewardship

.
The bridge is also adjacent to the existing vehicular bridge for U.S. Highway 191. This adjacency and the bridge location as part of Lions Park help soften the visual contrast of the pedestrian bridge. The BLM should be involved in the design process of the bridge.

Although the current project exceeds VRM II standards in the short term as viewed from the river, and although the improvements to the road, bike path and the pedestrian bridge will draw the attention of the casual observer, if properly mitigated the proposed action will serve as an outstanding viewing platform for people to enjoy the world class scenery of the Colorado Riverway Corridor. It should be noted that the degree of contrast would only exist in the short term, and only as viewed from the river.

Cultural Resources

Since no cultural resources were detected during the Section 106 survey, there are no direct or indirect impacts to cultural resources.

Endangered Animal Species

Endangered Fish

Humpback chub

The U.S. Fish and Wildlife Service, in a Biological Opinion rendered on March 29, 2004, concurs that the proposed action "may affect, but is not likely to adversely affect" the humpback chub.

Colorado pikeminnow, razorback sucker, and bonytail chub

Implementation of the proposed projects will result in construction activity within critical habitat for the Colorado pikeminnow, bonytail chub, and the razorback sucker. Destruction or adverse modification of critical habitat is defined in 50 CFR 402.02 as a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. The loss of a single piece of habitat may not jeopardize the continued existence of the species, but it may reduce the ability of critical habitat to contribute to recovery.

Colorado River Non-Motorized Bridge

In constructing the non-motorized bridge, approach and abutment structures must be built on both sides of the river and two or three piers will be installed into the river channel. Both activities will alter the river channel bottom and introduce sediment and possibly nonnative materials into the water column from excavation and dewatering. There is the possibility of cement contamination from spillage and contact of water with concrete. Equipment will be in the river during excavation and construction. The greatest risk to fish in these waters would be during spawning and during early life stages.

Other construction activities related to the non-motorized bridge include: building handicap accessible approach ramps to connect the bridge with the existing bike lane and walkway, and adding an asphalt surface to the graveled road and parking area on the north side of the river. This activity would take place in areas where existing paths, roads, parking lots, and disturbed ground already exist.

State Route 128 Bicycle Path

The entire proposed bike path, with the exception of the two already mentioned segments, is within the State Route 128 right-of-way and would closely follow most of the State Route 128 alignment. Of the proposed 3.2 miles of bike path, all is planned to be well above the bank-full elevation of the river. Construction of this 10 foot wide path would cause little new disturbance within the highway right-of-way. Disturbance to soil could lead to elevated sediment loads into the river during rain events. Vegetation will be removed along the path alignment, but most of this vegetation is growing in disturbed areas. Minimum riparian vegetation will be removed, and all large cottonwoods will be avoided within the project area. Habitat adjacent to the river will be disturbed from the activities of heavy equipment, but equipment will avoid entering the river when possible. Construction activity will require leveling and prepping of the path surface.

In the narrow canyon region from Lions Park to where the path leaves the roadway at the drainage above Goose Island (~.8 miles); and from where it returns to the roadway until Negro Bill Canyon (~1.4 miles); all riparian vegetation will be permanently disturbed by heavy equipment activity. Filling and leveling from the path to the ordinary high water line will permanently disturb approximately 34 acres of riparian habitat. Outside of the proposed path construction, no fill will be removed, dumped, or excavated onsite. If additional fill is needed for the path construction, it will be hauled in from outside the proposed project site. Upon completion of the path construction, excess fill will be used onsite to remediate disturbed areas. Disturbance within these segments will require erosion stabilization and vegetative rehabilitation. Riparian disturbance from the bridge construction and the bike path will be less than 35 acres. Restoration of riparian habitat at Williams Bottom Campground will be used to offset riparian habitat loss, alterations, and degradation from the bridge and bike path construction activity along the Colorado River.

The segment of the path that runs below the highway along the flat region of the floodplain (~1.03 miles) will incur approximately 7.5 acres of damage to riparian soils and vegetation. Construction activity within large drainages such as Ice Box and Negro Bill (~.64 miles) may alter hydrology and damage riparian vegetation and soils on approximately 6 acres, (fax to Kate Schwager, FWS from Pam Riddle, BLM on March 24, 2004). Stabilization and vegetation rehabilitation will be completed in these areas to minimize erosion and restore wildlife habitats.

Approximately 36% (~1.15 miles) of the path will require special construction methods and result in an estimated disturbance of 16 acres due to narrowness of the section, (fax to Kate Schwager, FWS from Pam Riddle, BLM on March 24, 2004). In these narrow

sections, highway guardrails, concrete curbing, and riverside handrails will be supported by gabion and key block retaining wall or similar structures, requiring additional land excavation. Two bridges, an 80 foot long bridge at Negro Bill Canyon and a 65 foot long bridge at Ice Box Canyon, may cause an estimated disturbance of 4.5 acres to drainages during construction and alter flow patterns, (fax to Kate Schwager, FWS from Pam Riddle, BLM on March 24, 2004).

Water will be used for dust control and soil compaction during the construction of the bike path. The contractor is responsible for purchasing water from a private or municipal source and has not yet identified where they will obtain this water or amounts that will be needed. USFWS will need to be contacted if water depletion from the Colorado River will occur and reinitiation of formal consultation will be required.

Analyses for Effects of the Action

The proposed bridge and bike path construction activity will be located along the banks of the Colorado River. This reach of the river also lies within Critical Habitat for the endangered Colorado River fishes, of which Colorado pikeminnow, bonytail chub, and razorback sucker are known to occur and spawning may occur. Primary constituent elements have been identified as necessary for survival and recovery of the endangered fishes, including, but not limited to: water, physical habitat, and the biological environment. The construction activities for both the bicycle path and bridge may affect physical habitat and water quality.

Physical Habitat: The construction of a cofferdam will alter flows while forms are built and piers are poured, and could strand fish in isolated pools. The installation of piers into the riverbed will cause disturbance to the channel bottom. Disturbance to the channel and river bed could negatively affect the endangered fish and their habitat.

Altered flow and disturbance from the cofferdam to the channel bottom will be temporary and will be completed before spring high water flows, thus avoiding any alteration to migrational efforts, spawning, and incubation that may occur the following year. The bridge foundation will be permanent, altering channel bottom and flow patterns within the immediate area.

Spawning has been known to occur upstream from this site and there is the potential for fry and fingerling size young to be present in the construction site area during various construction activities well beyond the designated timing of spawning. Although activities that are specifically detrimental to spawning and hatching will be avoided during designated critical times, other activities determined not directly detrimental to spawning or activities occurring after the spawning period may negatively affect the young of the year.

Water Quality: Construction associated with the building of the bridge, the bridge approaches, and the bike path will cause disturbance to the soil in this area and could affect water quality. Fugitive dust and run off carrying silt loads from rainstorms could

increase the turbidity of the water in this area and downstream. Construction methods involving building bridge foundations, pouring concrete into forms, constructing and using cofferdams, laying asphalt, and installing retaining walls; combined with the use of heavy equipment; will disturb the river bed and surrounding soil adjacent to the river. This activity will add sediment to the water when runoff occurs. The low level and temporary nature of this added sediment to the water should not negatively effect the environment of these endemic fish, as they have evolved in highly variable environments that include high sediment loads, and thus are adapted to increased turbidity within the system.

Possible contamination could also result from the concrete when poured into pier forms. Care should be taken by the contractor to minimize spillover during concrete pouring.

Water Depletion: The proposed action specifies that municipal sources will be used to acquire project water. According to Colorado River Endangered Fish Recovery Program and Section 7 Agreements, any depletion of the Colorado River will result in jeopardy to endangered fish. USFWS will need to be contacted if water depletion from the Colorado River will occur and reinitiation of formal consultation will be required. If it is determined that water must be taken from the Colorado River, fish populations that reside within this area, including the endangered fish of the Colorado River, may be affected. Water depletion can negatively affect larval and small fish if pumps are not located in a proper area of the water column and correct screening is not used.

Species' Response to the Proposed Action

Alteration of physical habitat and water quality are the primary impacts of the proposed bicycle path and bridge. The proposed fill material would be placed in an area of the floodplain that is currently floodable and provides habitat for fishes during high flows. While the area of habitat loss is not large, any loss of floodplain habitat could reduce the ability of critical habitat to contribute to recovery.

Floodplain habitat along the Colorado River has been identified as very important to Colorado pikeminnow, bonytail chub and razorback sucker and therefore, has been designated as critical habitat. Physical habitat is a primary constituent element of critical habitat and reducing physical habitat in a floodplain area by the placement of fill material is a direct alteration of critical habitat.

The reduced availability of flooded bottomlands and backwater habitats in the upper Colorado River Basin has been identified as a limiting factor in the recovery of the endangered Colorado River fish (Irving and Burdick 1995). Flooded bottomland and backwater habitats enhance the survival of larval and juvenile fish to breeding age (Modde et al. 1996). Any reduction in the survival rate of adult, larval, and juvenile fish would reduce recruitment into the breeding population and significantly reduce the overall population viability of these species in the upper Colorado River Basin.

Water quality is defined by parameters such as temperature, dissolved oxygen, environmental contaminants, nutrients, turbidity, and others. Fish exhibit both lethal and sublethal responses to environmental contamination. There is the possibility of contamination from oil or gas leaks from construction equipment. Exposure to oil or gas could cause heart and respiratory rate changes, enlarged livers, reduced growth, and fin erosion.

Channel bottom disturbance and riverbed alterations from the construction activities will cause sedimentation. Increases in sediment reduce water clarity and increase turbidity, thus reducing primary productivity. High sediment concentrations can also harm fish directly by causing death, reducing growth or resistance to disease or preventing successful egg and larval development, affecting natural migrations, and indirectly by reducing the abundance of food.
Construction activities could impact critical habitat by increasing sediments in the water that could harm fish if construction occurs during the spawning period or soon after when larval Colorado pikeminnow, bonytail chub, and razorback suckers are present in the river system. This short term habitat impact will be avoided by restricted construction timeframes listed in the reasonable and prudent measures.

The project, as described, could result in the following effects on species within the project area:

Habitat loss, modification, and degradation within designated critical habitat.

Lethal or sublethal water or soil contamination from the construction operations. Even small, nonlethal amounts of contaminants may impair olfactory responses of the fish with potential behavior and reproductive success implications.

Channel bottom disturbance and flow alterations will occur due to cofferdam construction and permanent bridge foundations in the riverbed. Excessive sedimentation could inhibit the prey base for fish species by filling interstitial spaces where macroinvertebrates reside, as well as reducing potential spawning habitat. Dewatering may cause alteration to migrational efforts.

Some of these impacts would be minimized through committed environmental protection measures presented in the biological opinion and by reasonable and prudent measures.

CONCLUSION OF THE BIOLOGICAL OPINION (U.S.F.W.S. March 29, 2004) REGARDING ENDANGERED FISH

After reviewing the current status of the Colorado pikeminnow, bonytail chub, and razorback sucker; the environmental baseline for the action area; the effects of the action and the cumulative effects; it is the U.S. Fish and Wildlife Service's biological opinion that the State Route 128 Bicycle Path and Colorado River Non-motorized Bridge projects are not likely to jeopardize the continued existence of the Colorado pikeminnow, bonytail chub, and razorback sucker and are not likely to result in destruction or adverse

modification of critical habitat. (see “”Formal Section 7 Consultation” UT-04-F-002-04-0584 dated March 29, 2004)

The Service reached this conclusion for the following reasons:

The proposed action, construction of the State Route 128 Bicycle Path and Colorado River Non-motorized Bridge, includes measures to offset impacts to physical habitat and minimize negative impacts to water quality within the floodplain and riverine environments.

The disturbance and temporary modification of 35 acres of riparian habitat will not appreciably diminish the value of designated critical habitat in the survival and recovery of the Colorado pikeminnow, bonytail chub, and razorback sucker.

Construction activity for the bridge would be confined to the Lions Park and north shore boat ramp areas which have both been heavily modified by past construction activity, including past bridge construction.

The bike path would closely follow the alignment of State Route 128 except in the portion of the route below the Goose Island Overlook and part of the Lions Park area. The path will be located above the bank-full elevation of the river.

Riparian habitat loss, alterations, and degradation from construction activity along the Colorado River will be offset through planned applicant-committed measures at Williams Bottom.

To minimize incidental take and disturbance to spawning adults, eggs, and fry, **all construction activities that involve any disturbance to the river waters or associated drainages will not take place during spawning, incubation, and fry stages of the Colorado endangered fish (May-August).**

Altered flow and disturbance from cofferdam construction to the channel bottom will be temporary and will be completed before spring high water flows, thus helping to avoid alteration to migrational efforts, spawning, and incubation that may occur the following year.

Temporary increases of sediment in the water should not negatively effect the environment of these endemic fish in the long term. The fish have evolved in highly variable environments that include high sediment loads, and thus are adapted to increased turbidity within the system.

There will be no water depletions of the Colorado River, as described.

The conclusions of the Biological Opinion are based on full implementation of the project as described in the biological assessment, description of the proposed action

section of this document; including all applicant-committed conservation measures that were incorporated into the project design.

Incidental Take Statement (U.S.F.W.S., March 29, 2004)

Section 9 of the Endangered Species Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harm" is defined (50 CFR 17.3) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. "Harass" is defined (50 CFR 17.3) as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding or sheltering. "Incidental take" is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by BLM so that they become binding conditions of any grant or permit issued to an applicant, as appropriate, for the exemption in section 7(o)(2) to apply. BLM has a continuing duty to regulate the activity covered by this incidental take statement. If BLM (1) does not assume and implement the terms and conditions or (2) does not require any applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, BLM must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement. [50 CFR §402.14(i)(3)].

Amount or Extent of Take

The U.S. Fish and Wildlife Service anticipates a small but unquantifiable number of Colorado pikeminnow, bonytail chub, and razorback sucker will be taken as a result of this proposed action. Incidental take is expected to be in the form of death or physical injury from disturbance to the channel bottom and spawning area, changes in water quality, and possible stranding of fish during construction of cofferdams.

The U.S. Fish and Wildlife Service anticipates that this take would be temporary because remedial actions will be implemented immediately by BLM if highly increased sediment or concrete contaminant levels, or stranded fish are detected at any time during project operations and that appropriate reclamation and restoration plans will be developed and effectively implemented.

The exact number of individuals that may be taken as a result of the proposed action is difficult to detect for the following reasons: 1) in a large river system such as the Colorado River, finding a dead or impaired specimen is unlikely, 2) sublethal effects will be difficult to detect and more likely, could only be speculated based on results of water quality monitoring, and 3) aquatic resource monitoring may not be sensitive enough to detect low level changes in the environment. However, with the implementation of the conservation measures that are part of the proposed action, and the small number of fish likely in the potentially affected area, the number of individuals taken should be very low. If the numbers of individuals taken are higher than expected, this would be a concern for the efficiency of the conservation measures and the assumptions on the populations present in the area.

To ensure that implementation of the proposed action would halt if incidental take levels were higher than anticipated, a level of 10 total Colorado pikeminnow, bonytail chub, or razorback sucker killed during the construction activity implemented as part of the proposed action is set as the authorized limit.

Effect of the Take

In the accompanying biological opinion, the USFWS determined that this level of anticipated take is not likely to result in jeopardy to the fish species.

Endangered Birds

Southwest Willow Flycatcher (SWWF)

Southwest Willow Flycatcher will not be affected by the construction of the non-motorized bridge because activity would be confined to the Lions Park and north shore boat ramp areas, which have both been heavily modified by past construction activity, including past bridge construction. This area is also a high use and traffic area. Matt Johnson, Wildlife Biologist with Southwest Biological Science Center, Colorado Plateau Field Station at the Northern Arizona University has surveyed the surrounding area and no SWWF were identified in his two-year surveys.

On March 29, 2004, the U.S. Fish and Wildlife Service concurred that the proposed project "may affect, but is not likely to adversely affect" the southwest Willow Flycatcher

Mexican Spotted Owl

The proposed bike path site **does not lie within or near Critical Habitat for the Mexican spotted owl as designated by the USFWS**. The proposed bike path does not lie within habitat designated by either the 1997 or 2000 Willey-Spotskey's MSO Habitat Model, but segments of the proposed bike path do lie within a .5-mile buffer zone of habitat identified in both models (See MSO Habitat Map). This habitat, as identified by the 1997 and 2000 models, borders State Highway 128. The road separates the potential habitat from the proposed activity and bike path. Highway 128 is a high use, two-lane road that creates continual disturbance to the edge of this potential habitat. The proposed action may increase activity during construction, but once complete, this bike path will add little new activity to the area and should decrease activity on the side of the road that borders the modeled habitat.

During field reviews by Lisa Hathaway of Southwest Research, portions of Negro Bill Canyon were identified as the suitable habitat. Southwest Research found that other areas within modeled MSO habitat along Highway 128 did not display the narrowness and complexity that depicts habitat suitable for MSO. The cliff walls along the highway were the most unlikely areas to offer MSO habitat. The most promising areas were two upper side drainages in Negro Bill Canyon, well over 0.5 miles from the highway.

Habitat determined suitable was surveyed according to protocol in 2003. Surveys are complete and no owls or nest sites were found. Historical surveys done in the early 1990's did not produce any MSO activity.

On March 29, 2004, the U.S. Fish and Wildlife Service concurred that the proposed project "may affect, but is not likely to adversely affect" the Mexican spotted owl.

Mitigation

Reasonable and Prudent Measures

The U.S. Fish and Wildlife Service believes the following reasonable and prudent measures are necessary and appropriate to minimize impacts of incidental take of the Colorado pikeminnow, bonytail chub, and razorback sucker.

Conduct all proposed actions in a manner that will minimize potential for soil, water, and other biological impacts to the endangered fish species from construction activities.

Conduct all proposed actions in a manner that will minimize disturbance of critical habitat for the Colorado pikeminnow, bonytail chub, and razorback sucker

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Endangered Species Act, the BLM will comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

The following actions and protective measures in addition to the previously listed applicant-committed environmental protection measures will be taken by construction contractors and crews to minimize impacts to the floodplain and riparian corridor, and the adverse modification of critical fish habitat; minimizing direct take of fish for both proposed activities:

All previously listed applicant-committed environmental protection measures will be fully implemented during project planning and construction activities

Construction activities that involve any disturbance to river waters or associated drainages will not take place during spawning, post-

spawning, incubation, and fry stages of the Colorado pikeminnow, bonytail chub, and razorback sucker (May-August).

Construction activities that involve any disturbance to the rivers waters or associated drainages will avoid creation of isolated pools or stranding of fish within microhabitats.

Where isolated pools are formed, UDWR or qualified personnel approved by the Service will be contacted to remove and seine any entrapped endangered fish.

Provisions to maintain UDWR or other qualified biologists on-site must be made prior to commencement of construction activities.

BLM, the applicant, and contractor will ensure that construction equipment is not leaking hazardous substances. Any spills or leaks will be immediately cleaned up.

Upon completion of the project, BLM will provide the Service with a report documenting how the reasonable and prudent measures and the terms and conditions were implemented and numbers of any fish taken.

Reporting Requirements

The incidental take statement provided in this biological opinion satisfies the requirements of the Endangered Species Act of 1973, as amended.

Upon locating dead, injured, or sick listed species, immediate notification must be made to the U.S. Fish and Wildlife Service's Salt Lake City Field Office at (801) 975-3330 and the Service's Division of Law Enforcement, Ogden, Utah, at (801) 625-5570. Pertinent information including the date, time, location, and possible cause of injury or mortality of each Colorado pikeminnow, bonytail chub, or razorback sucker taken shall be recorded and provided to the Service. Instructions for proper care, handling, transport, and disposition of such specimens will be issued by the U.S. Fish and Wildlife Service's Division of Law Enforcement. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state.

Monitoring: Applicant Committed Environmental Protection Measures

BLM commits to ensure the following activities are implemented during project planning and development and are part of the permit process:

Fencing will be installed to prevent material from entering river or side drainage.

Erosion control barriers will be installed to reduce possible erosion of riverbanks during construction.

Prohibit large equipment in the river unless permits have been issued and USFWS and the BLM are notified prior to the activity.

A restoration plan will be built into the contract and be in place prior to the start of the project.

Native vegetation such as willows and cottonwoods will be planted within the riparian region of the river and along drainages, where the area has been impacted by equipment use, construction activities, or travel.

Soil stabilization and erosion control devices will be used to ensure river banks and drainages are stable.

Native grasses will be used to re-seed disturbed soils.

Cleaning or maintenance of equipment near drainages, the river, or in the floodplain is prohibited.

Natural rock materials will be used where possible rather than concrete or other artificial materials in areas that are or will be in contact with water.

Retaining walls will be hydrologically designed to promote habitat heterogeneity.

No foot traffic will be allowed through low-velocity backwater habitats where young fish reside.

Inspection or biological monitoring will be conducted to ensure protective measures are being followed, environmental degradation is kept to a minimum, and any incidental take is recorded.

Educational information will be provided to construction workers on the Endangered Fish of the Colorado River, the importance of riparian habitats and vegetation, and how they can protect their environment.

Riparian habitat loss, alterations, and degradation from construction activity along the Colorado River will be offset through planned mitigation measures at Williams Bottom.

USFWS will need to be contacted if water depletion from the Colorado River occurs and reinitiation of formal consultation will be required.

No Action Alternative

Direct and Indirect Impacts

Recreation

If the bridge and bikepath were not built, recreationists would not be afforded a non-motorized recreation activity venue. Safety concerns to pedestrians and bicyclists would continue to be present along Utah Highway 128.

Visual Resources

The views of the Colorado River corridor would continue to be diminished by the heavy bank of tamarisk along the river. The natural appearance of the bank of the river as seen from a boat would remain in both the long and short term. (Although the tamarisk bank is, in reality, not the historically natural view from the river).

Cultural Resources

There were no cultural resources found in the project area.

Endangered Animal Species

If the bridge and bikepath were not built, there would not be an incidental take of the three endangered fish species.

Cumulative Impacts (past, present, reasonably foreseeable future)

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this EA. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

The Moab area receives intensive seasonal recreational use that is increasing over 13% annually (USFWS 1998). Recreational use of the Colorado River corridor is expected to increase as visitor numbers rise. Traffic use of state Highway 128 will increase. This could lead to an increase in use from private business that own recreational venues that cater to rafting, boating, photography, scenic tours on boat, bikes, and afoot, and fishing. Private use of the corridor will increase due to the scenic views and recreational opportunities offered here.

There are no known State, tribal or local actions identified which are reasonably certain to occur in the action area.

CONSULTATION AND COORDINATION

List of Preparers

Katie Stevens, Outdoor Recreation Planner
Donna Turnipseed, Archeologist
Pam Riddle, Wildlife Biologist
Russ von Koch, Recreation Branch Chief
Rob Sweeten, Visual Resources
Joe Cresto, Wildlife Biologist

Persons, Groups, and Agencies Consulted

The United States Fish and Wildlife Service was consulted on September 17, 2003 regarding impacts to the endangered animals in the project area. They responded by December 2, 2003, initiating formal consultation on the endangered fish species in the Colorado River. A Biological Opinion was issued on March 29, 2004 by the U.S. Fish and Wildlife Service.

A Feasibility Study was prepared by Robert Dalla in March of 2001 concerning the proposed Bike Path. This was presented to the partners in this project: Utah Department of Transportation, Utah Division of Water Rights, Utah Forestry, Fire and State Lands, Grand County and the Bureau of Land Management. This project has no Native American concerns.

Public Notice and Availability

Notification of the preparation of the environmental assessment was made on the EA Bulletin Board on November 24, 2003.

Appendixes

Map